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AUTHOR Mishler, Carol; Davenport, Margaret
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ABSTRACT

Attitudes held by younger and older students in mixed-age college classes were surveyed, as were the attitudes of teachers toward the mixed-age classes. Seven campuses in the University of Wisconsin system participated in the survey. Findings for the faculty included the following: faculty preferred an age-mix in class; almost all faculty expressed a "very" or "somewhat" favorable reaction; faculty felt that adults' presence in class brought an improved intellectual environment and more mature class discussion; about half of the faculty viewed adults' writing skills for college as better than those of younger students; and most faculty did not change their teaching style, type of assignments or tests, nor their management of class discussion in the mixed-age class. The student population surveyed was primarily freshmen and sophomores, and 60 percent were under age 25. Results of the student questionnaires included the following observations: the majority of students believed that mixed-age classes were more interesting; most students did not prefer classes composed exclusively of their own age group; most students viewed adults and younger students as comfortable socializing; and most felt that the age mix of the class had little effect on learning. Student and faculty questionnaires are appended. (SW)

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Faculty and Student Attitudes Toward the Mixed-age College Class

Carol Mishler, Assistant Director

Margaret Davenport, Graduate Assistant

Wisconsin Assessment Center
University of Wisconsin-Green Bay
Green Bay, Wisconsin

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Faculty Survey Highlights

+ Faculty respondents were teaching in arts and humanities, social science, math/computer science, education, natural science, and business areas, in that order. They were evenly distributed across ranks. Some or many of their classes in the past two years contained students of diverse ages.

+ Faculty prefer an age-mix in class. They view mixed-aged classes as presenting few special problems. Almost all expressed a "very" or "somewhat" favorable reaction.

+ Faculty agree that adults' presence in class brings an improved intellectual environment and more mature class discussion. They do not see adults lowering standards.

+ About half of the faculty view adults' writing skills and background for college as better than that of younger students. They do not think more adults than younger students need remedial coursework or study skills.

+ Most faculty are undecided about whether adults' math skills are better than those of younger students. Very few think adults' math skills are better.

+ Faculty are divided about whether adults and younger students differed academically.

+ Faculty do not agree that tension frequently exists between younger and older students in class. About two-thirds of the faculty disagreed that younger students are frequently intimidated by adults in class.

+ Most faculty do not change their teaching style, type of assignments or tests, nor their management of class discussion in the mixed-age class. Most do not see adults as requiring more time and energy than younger students do.

+ Faculty see the diversity of student experiences and the influence adults have on younger students as the greatest strength of the mixed-age class. The most frequent response to "what is the worst problem" was "no problems." Other responses mentioned specific problems of adults, e.g., their worries about how they are doing.

+ Faculty proposed a variety of tactics to "make the most" of mixed-age classes. These involved guiding and encouraging class discussion, teaching as usual, using adults as a resource, promoting interaction among age groups, and encouraging small group work.

Student Survey Highlights

+ The students surveyed were primarily freshmen and sophomores. About half were female. Sixty percent were under age 25.

+ The majority of students believe that mixed-age classes are more interesting, that the mix of ages has a positive effect on the class, and that the presence of adults is an asset in class.

+ Most students do not prefer classes composed exclusively of their own age group. They are divided as to whether they prefer to be in class with the 25-35 year old adult vs. the 35+ age group.

+ Most students agree that faculty take adults seriously in class, but few perceive adults as being better treated than younger students by professors.

+ Well over half disagree that the mixed-age class should be taught differently than the traditional-aged class.

+ Most students view adults and younger students as comfortable socializing and developing friendships at the university.

+ Most students believe adults participate in class discussion more than do younger students. Most disagree that adults inhibit younger students, slow the pace of class, or are shy and quiet in class.

+ More than half of the students report "getting more out of" a mixed-age class, yet they agree that the age mix of the class has little effect on learning. In another item, most students agreed that the age mix positively affects learning. Results seem contradictory and perhaps reflect differing interpretations of the items.

FACULTY AND STUDENT ATTITUDES TOWARD THE MIXED-AGE COLLEGE CLASS

I. INTRODUCTION

Research on the life cycle has shown that the developmental tasks faced by various age groups are quite different. For example, individuals in the "age 30 transition" may be seeking an end to the relative flux of the 20s and trying to form a stable base for the next ten years (Lasker, Moore, and Simpson, 1980). According to Erickson (1968), college-age adolescents are seeking an identity, freely experimenting with new roles, and freely rethinking aims and aspirations. When people in these different life phases find themselves together in the same college classroom, what happens? As Lasker, Moore, and Simpson (1980) have pointed out:

> Universities are becoming centers where adults of all ages and in all developmental periods meet together. From a life structure perspective, this mix may bring problems--because the needs and concerns of the students are sometimes in conflict--as well as opportunities for mutual learning as each age group draws on the strengths of the others" (p. 14).

As older students enter the university, classes once populated only by 18-22 year olds will become more "mixed-aged." What does this mix of ages mean for faculty and for students? How does the mix of ages affect student learning and interaction, class discussion, and the general atmosphere of the college classroom? What--if anything--are instructors doing differently in a mixed-age class? People who plan for adult students are interested in the views of faculty and students on these questions. Thus, the present survey of faculty and students in mixed-age classes on seven University of Wisconsin campuses was completed.

Past Research on Mixed-age Classes

Faculty Attitudes. Studies of faculty attitudes toward teaching mixed-age classes seem to have reached quite differing conclusions. Several studies, especially in the adult education field, have researched faculty attitudes and

have concluded that faculty are resistant to teaching adults. David (1979) points out that full-time faculty may see adult students as anti-intellectual, resistant to change or arrogant. Lindsey (1983) suggests that instructors may feel threatened by adults in class and may hold negative predispositions about them. Groves and Groves (1980) concluded that faculty retraining is needed for teaching classes with adult students.

Apps (1981), in his discussion of mixed-age classes in The Adult Learner on Campus, is careful to point out that the exemplary faculty he interviewed enjoyed working with adults, in some cases, preferring them over traditional aged students. Yet his book suggests that diversity of ages in class presents a problem for faculty. Some of the problems presented by mixed-aged classes include instructor time that the adult students require, the older student as a threat to younger instructors, and the lack of a "common language". Apps states that "many of the attitudes toward returning students expressed by faculty and administrators are often negative--particularly when we identify the returning student as someone interested in enrolling in a degree program" (p. 220).

In contrast, a study by Chandler and Galerstein (1982) found that faculty at the urban, commuter, upper-division University of Texas at Dallas saw no particular differences between older and younger students in class, except that the older students were better motivated. These faculty did not change their teaching style in response to the mixed-age undergraduate class. The study concludes that faculty retraining is not called for since attitudes were favorable and problems minor. Likewise, a survey of faculty concerning the development of a nontraditional degree program for adults (Hogan, Sewall & Rozga, 1980) revealed favorable attitudes towards adults as learners.

Student Attitudes. Past research on student attitudes concerning the mixed-age class seems to fall into two types. First, some researchers have explored the effects of "intergenerational" classes, meaning classes composed of elderly adults in their sixties or seventies, as well as traditional-aged students in their late teens or early twenties. These intergenerational class studies have found many positive effects resulting from integration of these age groups, notably that each group developed more favorable attitudes toward the other during the class (Powell and Arquitt, 1978; Steicher and Arquitt, 1975; Helling, 1972). Covey (1980) reported that 66% of senior citizen auditors at the University of Colorado preferred classes with younger students, as opposed to classes with their age group exclusively. Jensen-Osinski (1981), in an unique experimental study that included observational measures, found that attitudes on aging improved in the intergenerational freshman composition-literature classes but no unusual improvement in students' writing occurred. The study concluded that the intergenerational class provided a "stimulating atmosphere for learning" (p. 5). However, since elderly students are a very small segment of adult students, the intergenerational studies are not as relevant to the present study as are the second type of mixed-age class study.

A second type of study concerning mixed-age classes has involved surveys of younger students to determine their attitude toward the adult student, usually defined in these studies not as elderly but as in the mid-thirties or forties. Thus, the adults are more representative of the adults who are known to appear in college degree programs and the majority of mixed-age classes than are the elderly students in the first type of study. The findings of the mixed-age class studies have generally revealed positive attitudes of younger students toward adult students. Tindall and McCarter (1980) found that students younger than 28 years old rated students over 35 years old more

favorably than they rated their own age peers. Peabody and Sedlacek (1982) found that younger students held positive attitudes toward adult students in nonintimate, academic situations but not in intimate situations such as rooming, dating, or fraternity membership. Chandler and Galerstein (1982), after interviewing both younger and adult students, concluded that "age is not a relevant factor in the classroom relationship of instructor and student" (p. 48). In this study students' perceptions of class activity did not depend on age or sex. Last, a recent study (Hogan and Hendrickson, 1984) reports that both adults and younger students liked the mixture of age groups.

The studies that have been done suggest that students desire (or, at least, are not bothered by) a mix of ages in class. In spite of the great body of literature showing young peoples' negative attitudes toward older people and aging (e.g., Kogan and Sheldon, 1962), these negative attitudes do not seem to appear in a college classroom situation. The present study attempted to explore more deeply certain attitudes held by both younger and older students in mixed-age classes.

Questions Addressed

The questions addressed in the present study center on clarifying the attitudes of faculty, adult students and younger students toward mixed-age classes:

1. Would faculty and students (both adult and younger) express positive attitudes toward mixed-age classes?
2. How do faculty and students view adults in class? Are they viewed as more active participants in discussions, inhibitors of younger students, or more quiet and shy than their younger classmates?

3. What are the strengths faculty see in the mixed-age class? What are its special problems? What are faculty doing differently in teaching mixed-age classes?

4. How do students perceive relations between adults and younger students outside of class? Do they believe that friendships develop or that campus socializing occurs between age groups?

5. How do students perceive instructor behavior in the mixed-age class? Are adults treated well and taken seriously? Do students believe instructors should conduct a mixed-age class differently than usual?

6. Are there differences in student or faculty perception, according to age, field, or other factors?

To answer these questions, both faculty and students who were participating in mixed-age undergraduate classes were surveyed about their attitudes toward mixed-age classes. Seven campuses in the University of Wisconsin System participated in the faculty-student opinion survey.

II. METHODS AND PROCEDURE

The Pilot Study

In preparation for the large seven-campus study, a pilot study was conducted at UW-Green Bay in Fall 1983 to refine methods of identifying mixed-age classes and to determine the type of information that could be generated from faculty and students. In the pilot study, ten faculty at UW-Green Bay were interviewed for their perceptions about mixed-age classes and students in their classes were surveyed. From this pilot study, a faculty questionnaire was developed for the larger study and the student questionnaire was revised. Details concerning the pilot study are available in a short report (Mishler and Davenport, 1983). Basically, the pilot study demonstrated that useful data could be obtained in a study of mixed-age classes.

UW Campuses in the Study

Seven campuses in the University of Wisconsin (UW) System participated in the full study: the four-year campuses at River Falls, Parkside, Whitewater, and the two-year campuses at Baraboo, Manitowoc County, Marinette County, and Waukesha. The campuses were chosen to provide a diversity of college settings and locations. UW-Parkside, serving an urban commuter population in Racine and Kenosha, Wisconsin, has a high percentage of adult and commuter students; faculty and administrators there have been aware of the influx of adult students for many years. UW-Whitewater and UW-River Falls, on the other hand, serve primarily traditional-aged residential students. The original plan for this study called for the inclusion of two UW Centers (two-year institutions) but when four UW Center Deans expressed an interest in participating, all four were included to offer yet another type of college setting in which to study mixed-age classes.

The Questionnaires

Two questionnaires were used in the study, one designed to elicit faculty perceptions and comments about teaching mixed-age classes and a similar version designed for students. The faculty questionnaire contained 20 generalizations about mixed-age classes and adult students. The faculty respondents were asked to agree or disagree with each statement. The questionnaire also asked for their estimate of the number of mixed-aged classes taught and their general reaction to the mix of ages in class, cf. Appendix A. Three open-ended questions asked faculty to write comments about the strengths, weaknesses, and changes they made in teaching a mixed-age class. Background data, including the faculty member's discipline, years of experience, degrees, and rank were also gathered. Much of the material for the faculty questionnaires was drawn from the pilot study interviews with faculty.

The student questionnaire consisted of 20 statements about mixed-age classes, cf. Appendix B. Like faculty, students were asked to agree or disagree with each statement. Because a computer scannable form was used, no open-ended questions were asked of the students. We were limited to gathering data on age, sex, major, year in school and students estimate of the number of mixed-age classes they had during Spring 1983-84. The computer scannable form, however, did facilitate processing more than 1000 student questionnaires. The student questionnaire was pilot tested and revised for the large study.

Selection of Mixed-age Classes

Undergraduate and dual-level (graduate/undergraduate) classes that contained between 25%-75% adult students (aged 25 or older) were identified. These percentage points were chosen to ensure that the class would be truly "mixed-age," and not contain just one or two adult students or contain all adult students. The method of identifying classes varied slightly at each campus. At UW-Parkside and UW-Whitewater, a special computer program was written to identify second semester classes of the 1983-84 academic year that met these criteria. At UW-River Falls, a computer generated list of enrollment data for Winter quarter 1983-84 revealed the courses that appeared most frequently on adult students' schedules, along with the number of adults and total enrollment for the course. From this list, the percentage of adults in the course was calculated by hand. In yet another variation, the Registrar of the UW Centers provided class rosters that showed the number of students aged 25 and over in each section of a course. The percentage of adults

in each section could be easily calculated by referring to a printout that showed the total enrollment in each course. In short, the method of identifying mixed-age classes was adapted to the type of data provided by the campus.

At UW-Parkside, where more than 500 mixed-age classes were identified, and at UW-Whitewater, which had more than 100 such classes, a random sample of 50 classes was selected at each institution and the faculty of these classes surveyed. At UW-River Falls, 32 mixed-age classes were identified and the faculty of these classes surveyed. At the UW Centers 89 of the faculty teaching a mixed-age class were surveyed. Altogether, 221 faculty received a faculty attitude questionnaire and 70 of these faculty (ten per campus) were selected at random and asked to administer a survey to students in their mixed-age class. Classes with fewer than ten students were eliminated. Response rates from the faculty and student groups are given in a later section.

Procedure

Once faculty of mixed-age classes were selected for the study, personalized cover letters were prepared explaining the study and asking for their cooperation. One version of the letter (Form A) went to the faculty who were simply asked to complete the Faculty Opinion Questionnaire. Another version of the letter (Form B) went to the 70 faculty who were asked to administer the Student Opinion Survey, in addition to the faculty questionnaire. Copies of these letters are given in Appendix C. No special instructions were given for administering the Student Opinion Survey as the questionnaire was self-explanatory. The faculty were asked to have all students in their class complete the questionnaire except for those who may have already completed it in another class. No attempt was made to follow up

with students who were not in class on the day of the survey.

The cover letters, questionnaires, and return envelopes were distributed to faculty through campus mail by a campus coordinator. At the UW Centers, the deans handled this responsibility. At the four-year campuses, the mailing was handled by a director of community student services, an associate dean of continuing education, and a women's resource director--all persons chosen by the Wisconsin Assessment Center who were visibly identified on their campus with adult student issues.

One week after the first mailing, the campus coordinators mailed a follow-up postcard to the faculty. Approximately two weeks after the postcard, the campus coordinators telephoned and/or sent reminders to the few remaining nonrespondents. These mailings were completed during January-April of 1984 at all seven campuses.

Response Rate

A total of 201 faculty returned the Faculty Opinion Survey for a response rate of 95%. Data from sixty-five of the 70 mixed-age classes were returned for a response rate of 93%. A total of 1016 students completed the Student Opinion Survey.

Data Analysis

Frequency distributions for all questionnaire items were produced with crosstabulations by student age group. Opinion items were rated by students and faculty on a 5 point scale with "Strongly Agree," "Agree," "Undecided," "Disagree," and "Strongly Disagree," as scale points. For analysis of data, the "Strongly Agree" and "Agree" categories were collapsed, as were the "Strongly Disagree" and "Disagree" categories. Faculty's written responses to the open-ended questions were categorized with content analysis techniques.

III. FACULTY SURVEY RESULTS

Characteristics of Faculty

Table 1 shows the background of the faculty respondents and provides a profile of faculty teaching at least one mixed-age class during Semester I 1983-84. They were teaching in a variety of fields, including arts and humanities, business, math and computer science, social science, and education. Faculty were almost equally distributed across ranks.

Table 1
Characteristics of Faculty Respondents

	N=201 (Percentages)		N=201 (Percentages)
Discipline		**Years of Experience**	
Arts and Humanities	24	1-5 years	21
Business	10	6-10 years	23
Math/Computer Science	14	11-15 years	16
Natural Science	14	16-20 years	18
Social Science	19	21 or more years	22
Education	13		
Medical or Health Fields	3	**Education**	
Other	3	Less than doctorate	37
		Doctorate	60
Rank		Other	3
Full Professor	24		
Associate Professor	24	Estimate of Number of	
Assistant Professor	27	Mixed-Age Classes During	
Instructor	11	Last Two Years	
Lecturer	12	Many	59
Other	4	Some	32
		Few	9
Campus			
UW-River Falls	15	General Reaction to	
UW-Whitewater	22	Mix of Ages in Class	
UW-Parkside	21	Very favorable	79
UWC-Waukesha	21	Somewhat favorable	18
UWC-Baraboo	9	Uncertain	3
UWC-Manitowoc	5	Slightly negative	0
UWC-Marinette	7	Very negative	1

Over half of the faculty estimated that they have taught "many" mixed-age classes during the past two years. Only 9% reported encountering "few" mixed-age classes. Their general reaction to the mix of age in class was "very favorable," checked by over two-thirds of the faculty. Only one faculty member was negative about mixed-age classes and very few (3%) were uncertain about their reaction.

Faculty Opinion

Table 2 shows the faculty responses to the statements included in the questionnaire. Items have been grouped thematically into five categories in order to interpret results easily. Table 2 shows that most faculty say they prefer an age mix in class and that age diversity presents few problems for them. Few, however, would prefer to have all adults in class.

Table 2
Faculty Responses to Items

Category	Percentages SA or A	U	D or SD*
Preference for Age			
10. I prefer age mix	80	15	6
17. Age diversity presents few problems	82	5	13
19. I would prefer all adults	8	12	81
Adults' Effect on Class Climate			
1. More sophisticated, mature class discussion	87	8	5
3. Improved intellectual environment	87	10	4
4. Lower standards for class	2	3	96
5. Results in higher grades for all	5	21	75
20. Little influence on learning	33	28	40
Skills of Adults vs. Younger			
11. Adults' Writing skills are better	57	27	16
12. Adults' Math skills are better	4	60	36
13. Adults' background and preparation for college are better	49	24	28
14. Academically, not much difference	38	17	45
15. More adults need remedial coursework	6	20	75
16. More adults need help with study skills	6	16	78
Adults' Effect on Younger Students			
2. Frequently intimidated by adults	20	16	64
8. Tension frequently exists	5	8	83
Teaching Mixed-Age Classes			
6. I change my teaching style	24	7	69
7. I change type of assignments/tests	6	4	90
9. I control discussion more firmly	5	8	88
18. Requires more tire and energy	15	16	70

*SA=Strongly Agree, A=Agree, U=Undecided, D=Disagree, SD=Strongly Disagree.

NOTE: Raw totals may not equal 100 due to rounding. See questionnaire (Appendix A) for exact wording of each item.

How do faculty perceive adults' affecting the atmosphere of the classroom? Faculty were asked to agree or disagree with several ideas suggested by faculty in the pilot study interviews. For instance, a large majority of faculty agreed that adults' presence in class brings about "more sophisticated, mature class discussion" and "improved intellectual environment." Almost no faculty viewed the presence of adults as resulting in

lower standards for the class. On the other hand, faculty did not think that students got higher grades in mixed-age classes. Apparently, whatever learning is enhanced by the mix of ages does not manifest itself in higher grades.

In comparing skills of younger and older students, about half of the faculty perceived adult students as having an advantage over younger students in writing skills and background and preparation for college. Most of the faculty were undecided about adults' math skills, presumably because they had not had the opportunity to observe math skills in their discipline or class. However, few faculty saw adults needing remedial coursework or study skills more than do younger students. Faculty were divided about whether adults and younger students "differed academically."

The effect of adults on the younger students in the class was another area about which faculty were asked their opinion. Very few agreed that "tension frequently exists" between students of varying ages and only a minority (20%) believed that younger students were intimidated by adults.

The last group of items concerns changes the faculty of mixed-age classes have made in their teaching practices. As Table 2 shows, most faculty did not report changing their teaching style, the type of assignments or tests, or their management of class discussion in the mixed-age class. Most did not see adults as requiring more time and energy than younger students do.

Free Responses

The faculty's written comments to the three open-ended questions revealed more specific information about their preceptions of the mixture of ages in class. Specifically, faculty were asked to identify the greatest strength,

the greatest weakness and what they do to "make the most" of the mixed-age class. Faculty responses to each question were placed into categories according to the theme of each separate comment.

Greatest Strength of the Mixed-age Class. A total of 227 separate comments were classified into the categories shown in Table 3. By far the most

Table 3
Faculty Response to Greatest Strength in Mixed-age Classes

Category	Frequency of Response (Total Comments N=227)
Diversity of experiences	90
Positive influence of adults on younger students	49
Motivation of adults	21
Mutual influence of age groups on one another	21
More mature class environment	12
Desirable characteristics of adults (e.g. confidence, hard-working)	14
Raises standards for class	6
Stimulation of instructor	3
Miscellaneous	11

frequently made comment concerned the value of the diversity of student experiences that comes with a mixture of ages. Far from viewing diversity as a problem, the faculty viewed it as the greatest strength of mixed-age classes. Many comments had the flavor of: "Diversity of experiences of older students offers enrichment to class in general, makes discussions more interesting. Older students are frequently able to converse about subjects other than cars, football, more cars, and TV sit-coms."

The second most frequently made comment about the strength of the mix of ages concerned the positive influence that older students had on younger ones. Many comments discussed the value of adults as "role models" for younger students: "The respect for, and interest in, education and

intellectual inquiry exemplified by adults is frequently an inspiration to younger students." The serious attitude and motivation adults bring to the classroom was seen to "rub off" (a phrase used several times) on younger students, improving the "tone" of the class.

Other strengths of the mixed-age class mentioned in faculty comments were the high motivation of the adult students, the more mature class environment, and the mutual influence that students of different ages had on each other. Some faculty mentioned a variety of desirable characteristics of adults: "older students work more, study more," or "adults are somewhat more confident of their own views on controversial issues ...," or "older students bring to the classroom a more mature viewpoint, a wealth of experience, and 'street smarts!'"

Worst Problem with the Mixed-age Class. Another open-ended item asked faculty what they believed was the worst problem with mixed-age classes. Two hundred separate comments were made in response. The largest cluster of these comments, shown in Table 4, stated that there was no problem. Typical comments included: "I don't see any problems. Not having a mixed-age class is a problem for me." Another instructor stated: "Because I can't see any bad problems, I can't see any that appear to be worse." Clearly, this category emerged as the leading response.

Table 4
Faculty Responses to Worst Problem in Mixed-Age Classes

Category	Frequency of Response (Total Comments N=200)
No problem	62
Specific problems of adults	49
Younger students intimidated	26
Concerns of each age group about the other	19
Adults dominating class discussion	12
Lack of common ground	9
Deciding how to teach the class	6
Demanding of instructor time	3
Miscellaneous	17

Some comments, however, did point to specific problems that adults have as the worst problem with the mixed-age class. For instance, faculty made references to the time commitments of adults, a tendency for adults to worry and brood over performance, and their need to have courses relating directly to work. Several instructors mentioned an "academic gap" and "college anxiety" among adults who have been away from college for a long time. These were all problems inherent in the life of an adult or problems resulting from being out of the educational system for a time.

Another group of comments viewed the worst problem as the problem of younger students in the class being intimidated by older students. These comments mentioned that some younger students become discouraged when they are "out performed" by adult students. One person wrote: "Seventeen and 18 year olds often resent the involvement and strong performance of the returning adult ... We rarely like those who come onto our turf and either beat us at our own game or change the rules. The younger student rationalizes the situation by saying that the older student has nothing to do but study. This is, of course, ridiculous in the case of the homemaker with several children

who has to lock herself in the bathroom to study." Some comments referred to class discussions, where adults sometimes dominated the discussion or the younger students "let the adults take over."

Small clusters of comments dealt with problems discussed in adult education literature, i.e. the lack of common ground, deciding how to teach the class, and the demands on instructor time. Perhaps most noteworthy is the low number of comments made on these problems, especially compared to the larger categories.

How Faculty Make the Most of Mixed-age Classes. The last open-ended item asked faculty how an instructor can "make the most" of diversity of ages in class. Table 5 shows that of the 184 comments written in response, the largest cluster suggested ways of guiding and encouraging class discussion or using adults as a resource in class. Some examples of comments were: "Draw on the diversity of experience among students, especially in a small class," and "elicit the views of people of different age groups." Other faculty suggested "utilizing the older students as reservoirs of experience..."

Table 5
Faculty Responses to "Making the Most" out of Mixed-age Classes

Category	Frequency of Response (Total comments N=184)
Guide and encourage class discussion	49
Use adults as resource	35
Teach as usual--age not an issue	33
Promote interaction among ages	25
Encourage group work	12
Accept and know your students	10
"Make most of" has negative connotations	5
Miscellaneous	15

Another category of comments suggested teaching as usual. The idea expressed was that since there is no problem with mixed-age classes, there is no need to do anything differently in class. One example: "Since I don't believe that adult learners wish to be treated differently or specially, the best approach would be to make no changes in your approach to the expected course work loads." Others advised: "Don't make a 'big deal' over different ages," and "carry on as usual."

Variations Among Faculty

One might ask whether certain groups of faculty responded differently to the questionnaire. Were there variations among faculty opinions according to discipline, rank, years of experience, educational level or experience in teaching the mixed-age class? Several sets of analysis of variance were completed in order to reveal any variations in faculty response.*

Many of the characteristics of the faculty made no difference in their responses. For instance, no significant differences were found among responses from faculty at different campuses, of different ranks, of different number of years experience teaching, or with different educational attainment levels.

However, faculty from different academic fields and faculty with different levels of experience with the mixed-age class answered questionnaire items differently. Perhaps not surprisingly, arts and humanities instructors rated the academic skills of adults more highly than did instructors of math and science. The arts and humanities faculty also rated the "class climate" factors, such as the intellectual environment and the maturity of discussion, higher for the mixed-age class than did math and science instructors. In

* A technical report is available from the Wisconsin Assessment Center.

short, the arts and humanities faculty were ones most impressed with the academic skills of adults and the climate produced by the mix of ages in class.

Finally, faculty who checked that "many" of their classes over the past two years had contained a mix of ages were more favorably impressed with the climate of mixed-age classes than were faculty who reported teaching "few" such classes. The pattern suggests that those faculty with more experience teaching the mixed-age class were more positive about the climate of mixed-age classes.

IV. STUDENT SURVEY RESULTS

Characteristics of Students

Table 6 shows the characteristics of students who were surveyed in the mixed-age classes in this study. Because the study included the two-year UW Centers, a large percentage of students were freshmen or sophomores. About half reported being in "many" mixed-age classes within the last two years. Generally, the students' majors were spread across the disciplines, with the largest percentage (21%) reporting themselves as business majors. About (60%) of the students were under age 25. Table 6 also shows the discipline and enrollments and the percent of adults in the mixed-age classes.

Table 6
Student Respondents

	Total N=1016 (Percentages)		Total N=1016 (Percentages)
Major		Estimate of Number of Mixed-Age Classes During Last Two Years	
Business	21	Many	50
Education	16	Some	40
Medical or Health	13	Few	10
Arts and Humanities	11		
Social Science	10	Discipline of Class Surveyed in	
Undecided/Undeclared	9	Arts and Humanities	19
Natural Science	7	Business	8
Math or Computer Science	6	Math or Computer Science	16
Other	8	Natural Science	15
		Social Science	26
Year		Education	11
Freshman	35	Medical or Health	2
Sophomore	30	Other	4
Junior	14		
Senior	14	Enrollment of Class Surveyed in	
Special	3	15 or fewer	12
Graduate	4	16-25	48
		26-35	21
Sex		More than 35	20
Male	45		
Female	55		
Age			
20 years or less	36		
21-24 years	24		
25-29 years	15		
30+ years	24		

Student Opinion

Later parts of this report will explore responses by age group, but first it is important to view results as a whole. Table 7 shows responses of all students to the 20 items on the questionnaire. Like the faculty, the students' general perception of the mix of ages in class was positive. About three-fourths "agreed" or "strongly agreed" that mixed-age classes were more interesting, created a positive effect, and that adults were an asset in class. Few students preferred to have classes composed of only their own-age peers and there was no marked preference for having adult classmates in the 25-35 age range as opposed to those over 35. Most students professed to be aware of the ages of their classmates.

Table 7
Student Responses to Items
(N=1016)

Category	Percentages SA or A	U	D or SD*
General Perception			
1. Mixed-age classes more interesting	78	15	8
2. Mix of ages positive effect	77	17	6
5. Presence of adults asset in class	74	20	6
Age Mix Preferences			
4. Am unaware of age mix	15	8	77
6. Prefer own age in class	13	18	69
12. Prefer to be with age 25-35	31	33	35
Professors' Treatment of Adults			
6. Adults treated better	18	22	60
10. Adults taken seriously	71	22	7
14. Should conduct mixed-age class differently	14	23	62
Relations Outside Class			
16. Mixed-age study group awkward	7	18	75
17. Adults and younger comfortable socializing	59	28	12
18. Friendships often develop between older and younger	53	34	12
Characteristics of Adults in Class			
3. Adults inhibit younger students	10	18	73
7. Adults slow pace of class	7	10	83
11. Adults/younger more alike than different	62	24	14
15. Adults participate more	58	19	23
19. Adults shy and quiet	4	14	82
Effect on Learning			
9. Age-mix has little effect on learning	72	12	14
13. Age-mix positively affects learning	64	26	11
20. I get more out of mixed-age class	60	30	10

*SA=Strongly Agree, A=Agree, U=Undecided, D=Disagree, SD=Strongly Disagree

Most students agreed that adults were taken seriously in class by their professors, but few believed that older students actually received better treatment from professors. Nearly two-thirds of the students disagreed that professors should conduct a mixed-age class differently than usual. These percentages suggest a fairly strong satisfaction with the way instructors are handling the mixed-age class.

Concerning the characteristics of adults in class, little support was found for certain plausible-sounding generalizations that might be made about adult students. For instance, few students believed that adults inhibited younger students in class, slowed the pace of class, or were shy and quiet in class. Most students, in fact, believed that adults participated more in class discussions than did younger students. Overall, most students agreed that adults and younger students were more alike than different in the classroom.

Relations outside of class between students of varying ages did not seem to be a problem. Few students thought a mixed-age study group would be awkward. The majority agreed that adults and younger students are comfortable socializing on campus and that friendships between older and younger students often develop. Substantial percentages (28% and 34%), however, were undecided about the latter two statements.

The remaining three items asked students about the effect of the age composition of the class on the student learning that occurs. The majority of students agreed that the age mix of the class has little effect on learning. Perhaps students were only considering the negative effect on learning as they answered this item because the majority also agreed with the somewhat contradictory statements that age mix positively affects learning and that they "got more out of" a mixed-age class than a same-age one. Substantial percentages (26% and 30%) of the students checked "undecided" for the latter two items.

Student Opinion by Age Group

Table 8 shows the way adults and younger students answered the questionnaire items. As Table 8 shows, many of the differences between adult

Table 8
Responses by Age Group
(N=1016)

Category	Percent Checking "Strongly Agree" or "Agree" Young N=622	Adult N=394
General Perception		
1. Mixed-age classes more interesting	71	88*
2. Mix of ages positive effect	70	89*
5. Presence of adults asset in class	67	85*
Age Mix Preferences		
4. Am unaware of age mix	14	16
6. Prefer own age in class	16	8*
12. Prefer to be with age 25-35	39	18*
Professors' Treatment of Adults		
8. Adults treated better	24	9*
10. Adults taken seriously	73	70
14. Should conduct mixed-age class differently	12	19*
Relations Outside Class		
16. Mixed-age study group awkward	9	5*
17. Adults and younger comfortable socializing	58	61
18. Friendships often develop between older and younger	53	53
Characteristics of Adults in Class		
3. Adults inhibit younger students	13	5*
7. Adults slow pace of class	9	5*
11. Adults/younger more alike than different	59	65
15. Adults participate more	60	55
19. Adults shy and quiet	4	6
Effect on Learning		
9. Age-mix has little effect on learning	72	70
13. Age-mix positively affects learning	56	75*
20. I get more out of mixed-age class	43	69*

*Difference significant at $p \leq .05$

and younger student responses are significantly different. Because of the large number of students in each group, statistical significance is relatively easy to attain although results may have no practical meaning. Results should be viewed cautiously. However, the responses in Table 8 show that higher percentages of adults agreed or strongly agreed that mixed-aged classes are more interesting, that the mix of ages has a positive effect and that the presence of adults is an asset in class. They also agreed that professors should conduct the mixed-age class differently, more often than younger students agreed. Greater percentages of adults agreed that mix of ages positively affects learning and that they get more out of a mixed-age class.

On the other hand, adults were less likely to agree with statements that implied something negative about adults or the mixed-age class. They were less likely to think adults were treated better in class by professors, to prefer classes with no age mix, to show a preference for the "younger" adult aged 25-35, to find a mixed-age study group awkward, to think adults inhibited younger students or slowed the pace of class. In general, adults were more enthusiastic about the mixed-age class, although, as indicted by results presented earlier, younger students were, on the whole, favorably disposed toward mixed-age classes.

Variations Among Students

Variations among groups of students were explored with a series of analyses of variance, just as in the faculty survey. These analyses revealed that students' responses to the survey did not vary according to the student's major, year in college, or UW campus attended. However, several differences emerged according to sex, age, and other variables.*

* A technical report is available from the Wisconsin Assessment Center.

Women students were more satisfied than men with mixed-age classes. They were significantly less apt to agree with the statements that implied that adults had some negative effect on the class, e.g. slowing the pace of class. And they were more likely to agree with statements that implied "social comfort," e.g. friendships developing between younger and older students.

Responses varied with the age of student also. The older the student age group, the more satisfied the students were with mix-aged classes. The older students did not perceive negative impact on the class as often as did younger students.

The percentage of adults in the mixed-age class was another significant factor in how students answered the questionnaire. Students surveyed in classes containing from half to two-thirds adults perceived more benefits from the mixed-age class than did students with only one-quarter to one-third adults. Likewise, students reporting that "many" of their classes were mixed-age expressed more positive attitudes than did students who reported participating in "few" mixed-age classes. It seems that the students with more experience with the mixed-age class and with more adults in class responded very favorably.

V. CONCLUSIONS & RECOMMENDATIONS

Conclusions

Several conclusions seem warranted by the data from the faculty and student surveys:

1. Both faculty and students were overwhelmingly positive about mixed-age classes. This attitude was clear in responses to the "agree-disagree" statements and in the written comments made by faculty.
2. The problems presented by mixed-aged classes are perceived to be minor, compared to the perceived benefits. This survey generated little or no support for some previous findings about faculty and the adult student. For instance, although Apps (1981) found that "exemplary" instructors of adults often mentioned the drain on their time and energy, most faculty of mixed-age classes in this study did not report nor comment on this factor. Nor was there support for the idea that faculty are resistant to or threatened by adults in class or that age diversity in class is a major problem.
3. Although problems were minor, instructors had a variety of ideas for "making the most" of age diversity in class. Some of the suggestions refer to good basic teaching practices that could be used with any class. But other suggestions were made specifically for the mixed-age class and could provide useful "tips" for instructors interested in improving aspects of their mixed-age classes or for faculty faced with them for the first time.

4. For the most part, instructors of mixed-age classes have not radically changed their approach to teaching to accommodate adults in class. This calls into question the idea that massive faculty development is needed to cope with mixed-age classes.
5. Student satisfaction with the mixed-aged class and the instructors' treatment of students in younger and older age groups is evident in the student survey. The positive response of both groups suggests that occasional student complaints concerning mixed-age classes are not representative of the experiences of most students in mixed-age classes at the UW campuses in this study.
6. That younger students were slightly less enthusiastic about mixed-age classes than were adults should not be read as widespread dissatisfaction of younger students. Apparently younger students are "holding their own" in these classes without being overwhelmed by adults. At least, we did not pick up a great deal of younger student discomfort, although some faculty worry about that possibility.

Recommendations

Several recommendations can be made after considering the results of this study.

1. The study does not suggest a need for massive faculty retraining to deal with the mix of ages in class. In fact, since faculty perceive so few problems with the mixed-age class, efforts to bring about a major overhaul of teaching styles might even be resisted. However, faculty are clearly interested in the adult student. Some of the issues they have identified in their free responses could be turned into workshop sessions, e.g. dealing with the time constraint

problems of adults, dealing with the college anxiety of returning adults or dealing with "intimidation" of younger students in class.

2. The math and science faculty did not perceive adults' academic skills as favorably as did humanities faculty. This finding suggests that adults' math, science and quantitative skills are not as good as their writing and verbal skills. This is consistent with other Wisconsin Assessment Center studies (e.g. Fredrick, Mishler and Hogan, 1984) that have revealed adults' math skills to be worse than those of younger students. Although faculty did not perceive adults to be more in need of remedial coursework than are younger students, the possibility of offering help in shoring up quantitative skills should be explored.

3. Like other Wisconsin Assessment Center studies, this one suggests that no attempt be made to segregate classes by age and, in fact, integration of ages in classes should be encouraged. Since the age mixture is viewed as an asset in the classroom, policies which have the effect of segregating students by age should be avoided, if possible.

4. Results of this study should be shared with faculty, adult education personnel, students, and prospective students. Perhaps age diversity could actually be promoted as a benefit of attending a UW campus and the positive comments and receptivity of faculty toward adults publicized in UW literature. Particularly at campuses where students are likely to come from the same hometown and share similar backgrounds, age diversity offsets the homogeneous nature of the student body. Students and faculty should be aware of the benefits of a mixture of ages on campus.

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APPENDIX A: FACULTY OPINION QUESTIONNAIRE

Faculty Opinion Survey

We are interested in your views about undergraduate classes with a mixture of students from various age groups. This survey, which explores this issue, is being conducted in cooperation with your campus by the Wisconsin Assessment Center, a systemwide research center at the University of Wisconsin-Green Bay. Your responses are confidential. Please do not put your name on this survey. Please darken the appropriate oval for each question below.

I. GENERAL INFORMATION

1. Into which category do your present teaching responsibilities best fit?

O Arts & Humanities
O Business
O Math/Computer Science
O Natural Sciences
O Social Sciences
O Education
O Medical or Health Fields
O Other (Please specify) _____

2. What is your academic rank?

O Full Professor
O Associate Professor
O Assistant Professor
O Instructor
O Lecturer
O Other _____

3. Including this year, how many years of teaching experience have you had at the postsecondary level? _____

4. What is the highest level of education you have attained? (Mark one.)

O Less than Master's degree
O Master's degree
O Post-Master's work, no doctorate
O Doctorate
O Other _____

5. Within the past two years, about how many of your undergraduate classes have had a noticeable mixture of students of different ages?

O Many O Some O Few

6. What is your general reaction to your undergraduate classes having a noticeable mixture of age groups?

O Very favorable
O Somewhat favorable
O Uncertain
O Slightly negative
O Very negative

II. YOUR OPINION

Below are some statements about classes composed of students from different age groups. The statements are designed to measure perceptions; they do not necessarily reflect the opinions of the surveyors. For the purpose of the survey,the phrase "adult student" refers to a student aged 25 years or older. (Please mark the response which most nearly matches your reaction to the statement.)

Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	
0	0	0	0	0	1. The presence of adults in class results in more sophisticated, mature class discussion.
0	0	0	0	0	2. The presence of adults in class frequently intimidates younger students.
0	0	0	0	0	3. The overall intellectual environment of the class is improved when students are from mixed age groups.
0	0	0	0	0	4. Adults lower standards for the entire class.
0	0	0	0	0	5. The presence of adults in a class means all students are likely to get higher grades.
0	0	0	0	0	6. When teaching a mixed age class, I change my teaching style.
0	0	0	0	0	7. When teaching a mixed age class, I change the type of assignments or tests I give.
0	0	0	0	0	8. Tension frequently exists between younger and older students in class.
0	0	0	0	0	9. When teaching a mixed-age class, I control class discussion more firmly.
0	0	0	0	0	10. I prefer my classes to have a noticeable mix of student ages.
0	0	0	0	0	11. Adult students' writing skills are noticeably better than those of younger students.
0	0	0	0	0	12. Adult students' math skills are noticeably better than those of younger students.
0	0	0	0	0	13. The general background and preparation of adults for college is better than that of younger students.

Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	
O	O	O	O	O	14. Academically, there is not much difference between age groups.
O	O	O	O	O	15. More adults than younger students need remedial coursework.
O	O	O	O	O	16. More adults than younger students need to develop study skills.
O	O	O	O	O	17. A diversity of ages in class presents few special problems.
O	O	O	O	O	18. Adult students require more of an instructor's time and energy than do younger students.
O	O	O	O	O	19. I would prefer my classes to have all adult students rather than a mix of ages.
O	O	O	O	O	20. The age composition of a class has little influence on student learning in the course.

III. YOUR COMMENTS

The generalizations above reflect observations that some faculty have made about mixed-age classes, and, in particular, adult students. While we can assess your agreement or disagreement with those points from an opinion survey, we also need new ideas, stated in your own words. Please take a few minutes to write a sentence or two in response to the items below.

21. What do you see as the <u>greatest strength</u> of mixed age classes?

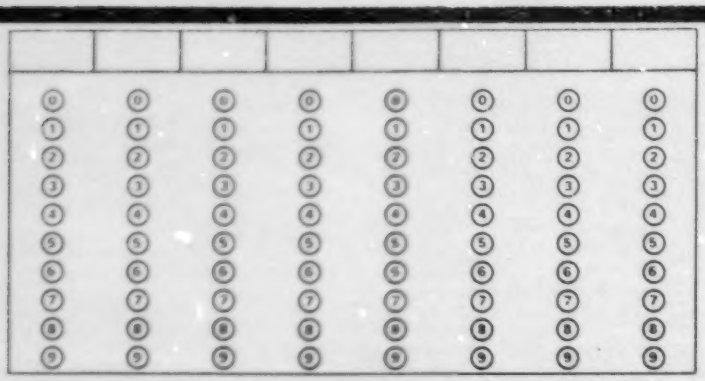
(OVER, PLEASE)

22. What do you see as the worst problem with mixed age classes?

23. If an instructor has a class with a diversity of ages, how can the instructor "make the most" of the situation?

WAC:12/1983

APPENDIX B: STUDENT OPINION QUESTIONNAIRE



EXAMPLES

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INSTRUCTIONS

1. Use No. 2 pencil
2. Do NOT use a pen
3. Erase completely
4. Make no stray marks

Student Opinion Survey

scanpak™

We are interested in your views about undergraduate classes with a mixture of students from various age groups. Your responses are confidential. Please complete the items below.

About how many of your classes have had a noticeable mix of ages?

☐ Many ☐ Some ☐ Few

Age: _____ Major: _____

Sex: _____ Year (Freshman, Sophomore, etc.) _____

The phrase "adult student" refers to one 25 years or older.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1. Classes composed of students from different age groups are more interesting than those in which all students are the same age.	○	○	○	○	○
2. Having a mixture of ages in a class generally has a positive effect upon the atmosphere of that class.	○	○	○	○	○
3. Having adult students in a class inhibits younger students from participating in class.	○	○	○	○	○
4. I am unaware of the mixture of ages in class.	○	○	○	○	○
5. The presence of adult students in a class is generally an asset to the class.	○	○	○	○	○
6. I would rather be in class with students my own age than with students from other age groups.	○	○	○	○	○
7. Adult students slow down the pace of the class.	○	○	○	○	○
8. Professors generally treat adult students better than they treat younger students.	○	○	○	○	○
9. The age composition of the class has little effect on what I learn in the course.	○	○	○	○	○
10. Professors generally take adult students seriously in class.	○	○	○	○	○
11. Adult students and younger students are more alike than different in the classroom.	○	○	○	○	○
12. I would rather be in class with adults aged 25-35 than with adults over 35.	○	○	○	○	○
13. Having a mix of ages positively affects student learning.	○	○	○	○	○
14. The class should be conducted differently when the majority of students are adult students.	○	○	○	○	○
15. Adult students tend to participate more in class discussions than do younger students.	○	○	○	○	○
16. A study group with adult and younger students would be awkward.	○	○	○	○	○
17. Between classes or at lunch, adult and younger students are comfortable socializing.	○	○	○	○	○
18. Friendships often develop outside of class between adult and younger students.	○	○	○	○	○
19. Adult students tend to be shy and quiet in class.	○	○	○	○	○
20. I generally "get more out of" a mixed-age class than one in which all students are my age.	○	○	○	○	○

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"Form A"

Professor

Dear Professor:

Classes once populated almost entirely by 18-22 year olds are now "age-mixed," containing students in their late twenties, thirties, forties, and beyond. What implications does the mixed-age class have for faculty? How does the age-mix affect student learning and interaction, class discussion, and the general atmosphere of the college classroom? People who plan for adult students are interested in the faculty's views on these questions.

As an instructor of at least one "mixed-age" class, you are being asked to give your opinion. You are one of a small sample of faculty on this campus whose name was drawn at random for inclusion in this study, which is also being conducted on six other UW campuses. In order that the results truly represent the opinions of the faculty, it is important that each questionnaire be completed and returned.

The results of this study will be made available to UW System faculty, administrators, and staff who plan for and work with older students. You may receive a summary of results by printing your name and address on the back of the return envelope.

The Wisconsin Assessment Center, a UW Systemwide center for the study of adult students, is conducting the study in cooperation with UW . I would be happy to answer any questions you might have. My campus number is . Thank you for your help.

Sincerely,

"Form A"

Professor

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The Wisconsin Assessment Center, a UW Systemwide center for the study of adult students, is conducting the study in cooperation with UW . I would be happy to answer any questions you might have. My campus number is . Thank you for your help.

Sincerely,

"Form B"

Professor

Dear Professor:

Classes once populated almost entirely by 18-22 year olds are now "age-mixed," containing students in their late twenties, thirties, forties, and beyond. What implications does the mixed-age class have for faculty? How does the age-mix affect student learning and interaction, class discussion, and the general atmosphere of the college classroom? People who plan for adult students are interested in the faculty's views on these questions.

As an instructor of at least one "mixed-age" class, you are being asked to give your opinion. You are one of a small sample of faculty on this campus whose name was drawn at random for inclusion in this study, which is also being conducted on six other UW campuses. In order that the results truly represent the opinions of the faculty, it is important that each questionnaire be completed and returned.

Because the views of the students are also important, we are asking a small number of faculty to distribute a brief questionnaire to students in their mixed-aged class. Would you be able to give out and collect the enclosed "Student Opinion Survey" to students in your class within the next two weeks? It should take less than 10 minutes of one class period.

You and your students may be assured of complete confidentiality. Your questionnaire has been coded for mailing purposes only so that we may check your name off the list when your questionnaire is returned. Only group data will be reported.

The results of this study will be made available to UW System faculty, administrators, and staff who plan for and work with older students. You may receive a summary of results by printing your name and address on the back of the return envelope.

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Sincerely,